Australian Government
Great Barrier Reef Marine Park Authority

Reef Explorer User Guide

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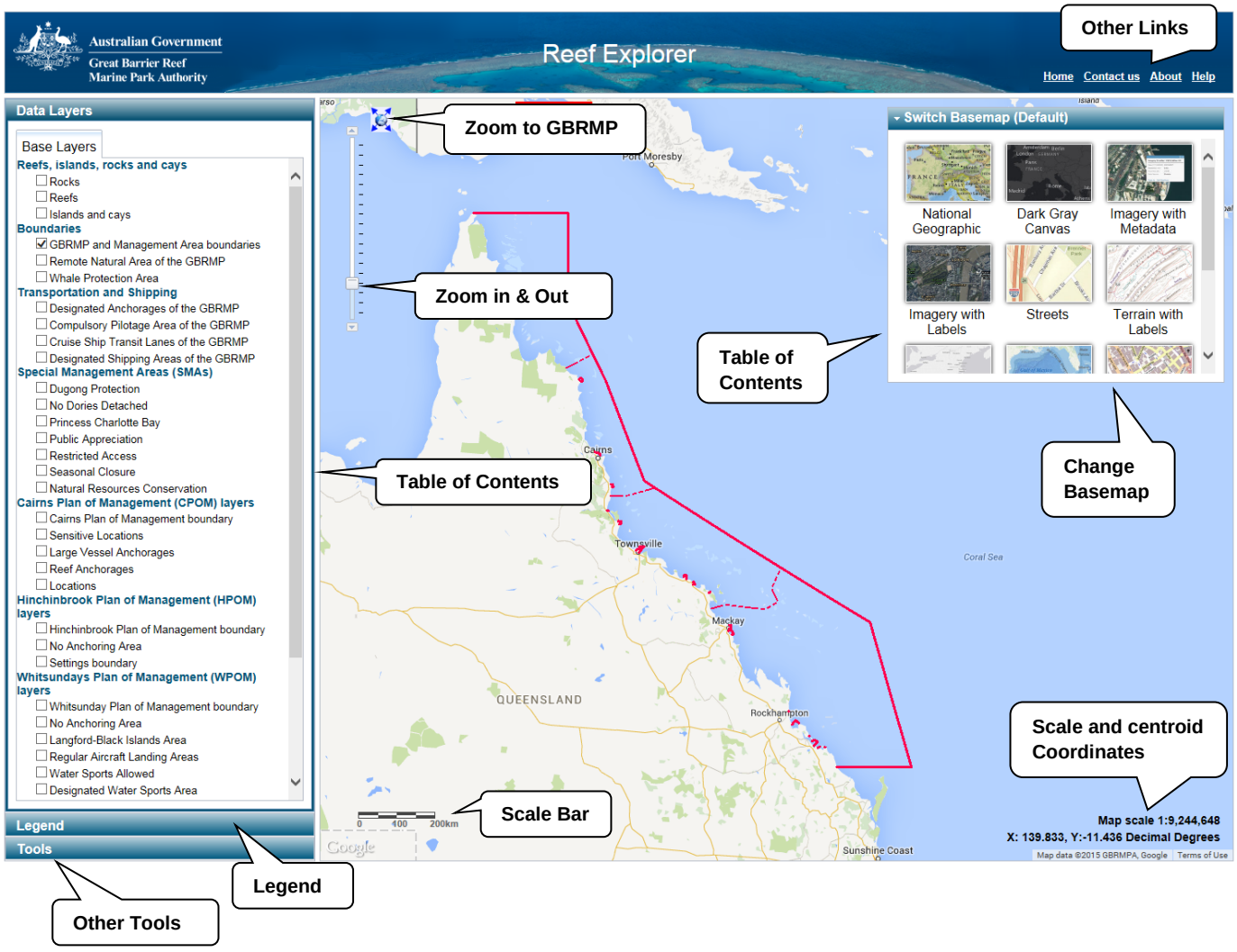
INTRODUCTION

Reef Explorer has been designed to provide simple online mapping to GBRMPA staff, and streamline the ability to answer frequent location based questions. This document has been provided as an initial user help reference, to assist user navigation of the site, and provide an awareness to the toolsets available.

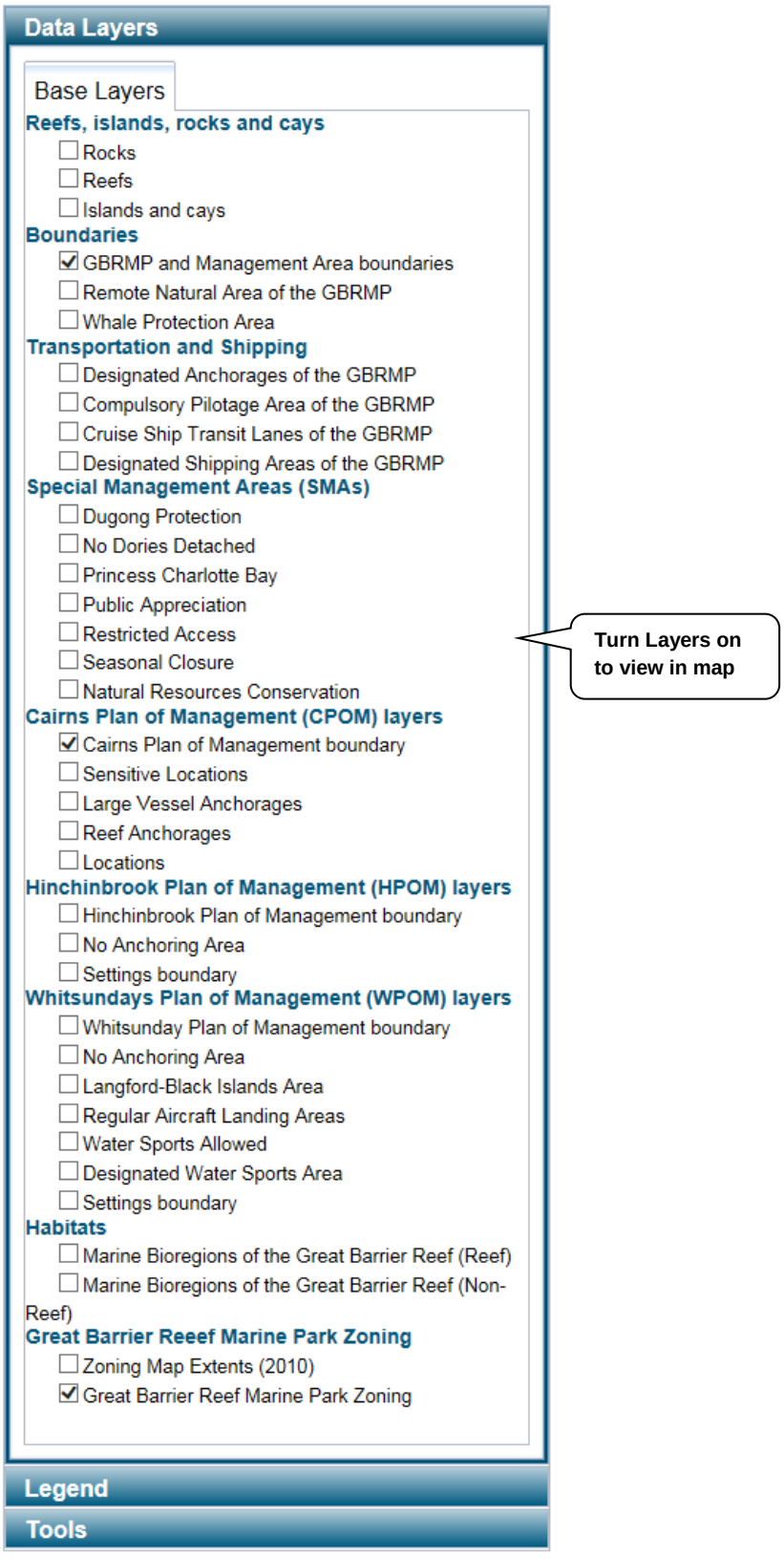
Reef Explorer has been designed to be update on a regular basis to reflect the changing needs of the Authority. Your feedback on the application, the data layers and tools are integral to the continued improvement relevance of the information provided in the application.

To provide feedback on this application please email gis@gbrmpa.gov.au.

USER INTERFACE



DATA CONTENT



BASEMAPS

Reef Explorer includes a number of default Basemap layers with content from ESRI and Google API catalogues that can be used as a background in the map view. This includes Satellite Imagery and Cartographic backdrops. Google Road is the default basemap for Reef Explorer.

ESRI BASEMAPS

National Geographic World Map

Designed as a general reference map for informational and educational purposes and as a basemap for use by GIS professionals and others for creating web maps and web mapping applications.

Light Gray Canvas Map

This basemap draws attention to your thematic content by providing a neutral background with minimal colours.

Ocean Basemap

Bathymetry, marine water body names, undersea feature names, and derived depth values in meters.

World Terrain Base

Shaded relief imagery, bathymetry, and coastal water features.

World Imagery

Satellite imagery for the world and high-resolution imagery for the United States, Great Britain, and many metro areas around the world.

GOOGLE BASEMAPS

Roadmap

Displays the default road map view which is the default for Google products.

Satellite

Displays Google Earth satellite images

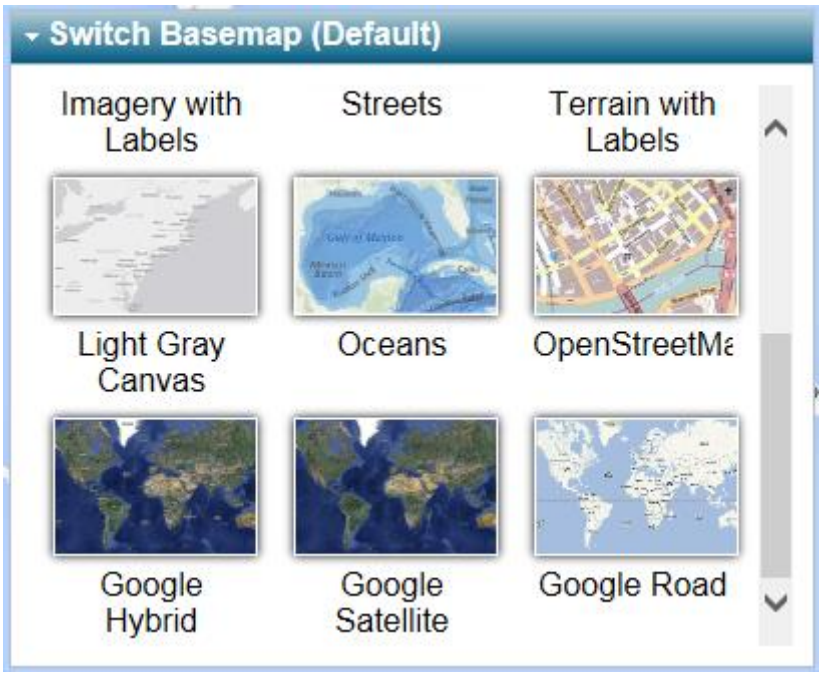
Hybrid

Displays a mixture of normal and satellite views

Terrain

Displays a physical map based on terrain information

Switch Basemap (Default)
National Geographic
Dark Gray Canvas
Imagery with Metadata
Imagery with Labels
Streets
Terrain with Labels


Switch Basemap (Default)
Imagery with Labels
Streets
Terrain with Labels
Light Gray Canvas
Oceans
OpenStreetMa
Google Hybrid
Google Satellite
Google Road

NAVIGATIONAL TOOLS

Reef Explorer leverages off a Google Maps Interface, and so has similar mouse click navigation.

	Pan	- Click and drag the map to reposition the extent
	Zoom In	- Scroll the mouse wheel forward or up to zoom in
		- use the zoom level bar to zoom in
		- holding the shift key and the left mouse button draw a rectangle with curser

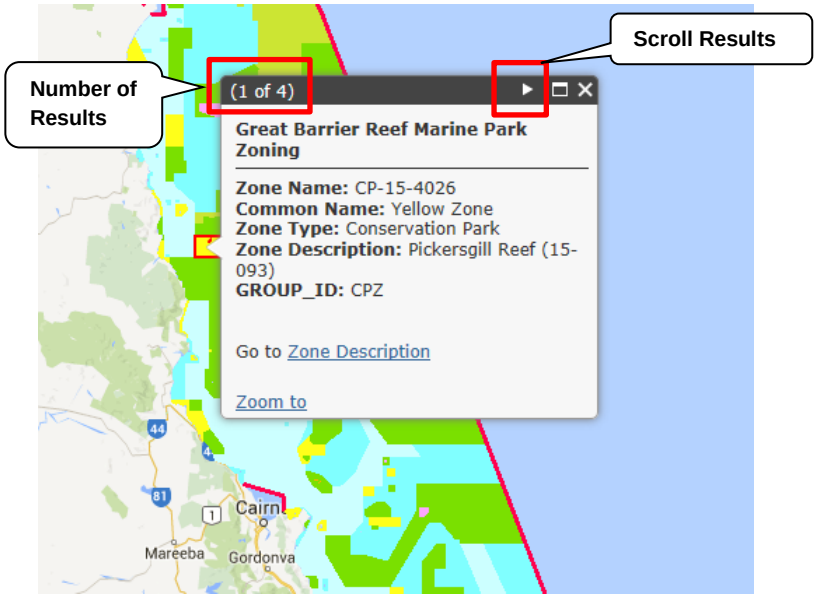
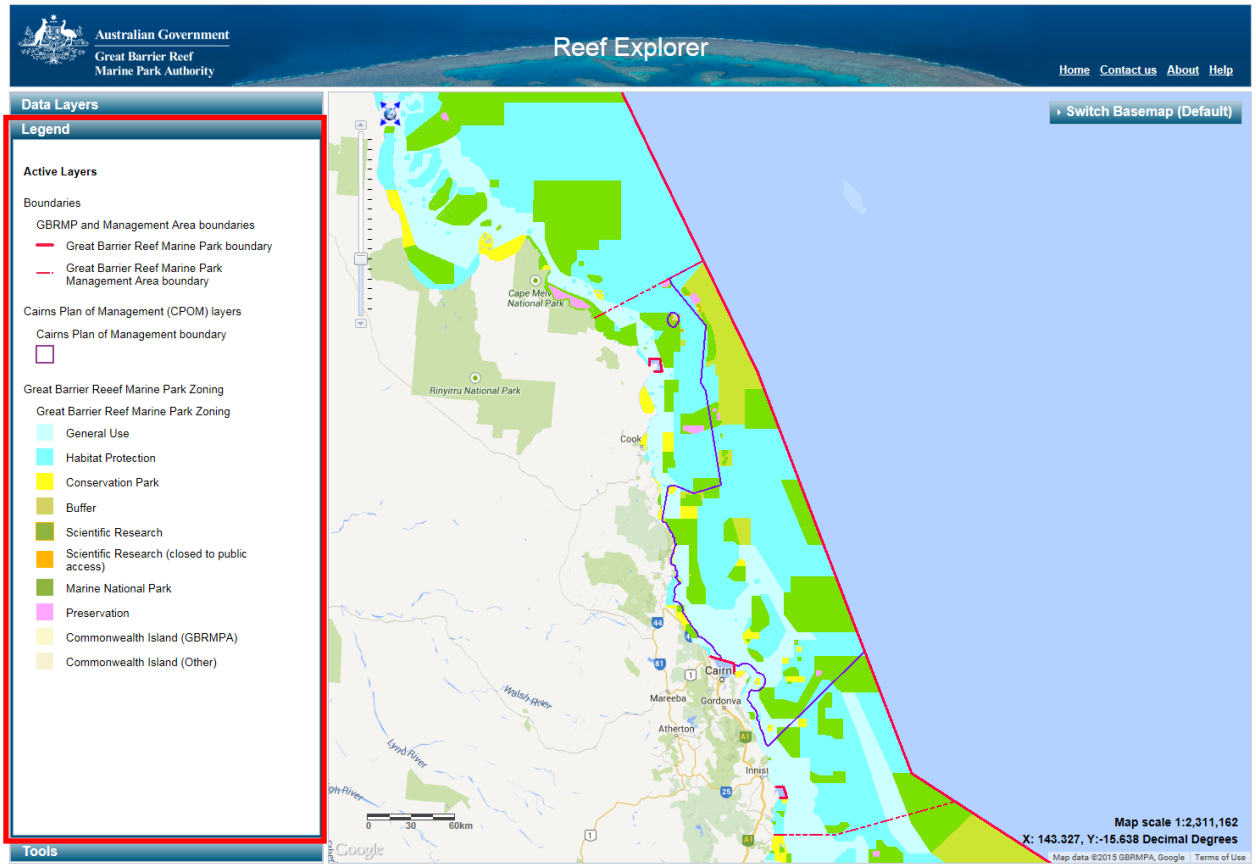
Left Single Click	Map Details	- Single click to return the details for all visible layers. The details returned will be similar to the example below. The arrow keys at the top right of the form can be used to step through the returned details.  - The area related to the information will be highlighted with a red outline and a transparent yellow fill.

TABLE OF CONTENTS AND LEGEND

Click the layers in the table of contents that you with to be included in the map. Adding a new layer to the map will also update the legend. To view the legend select the legend pane.

The ordering of the layers cannot be changed in the application.

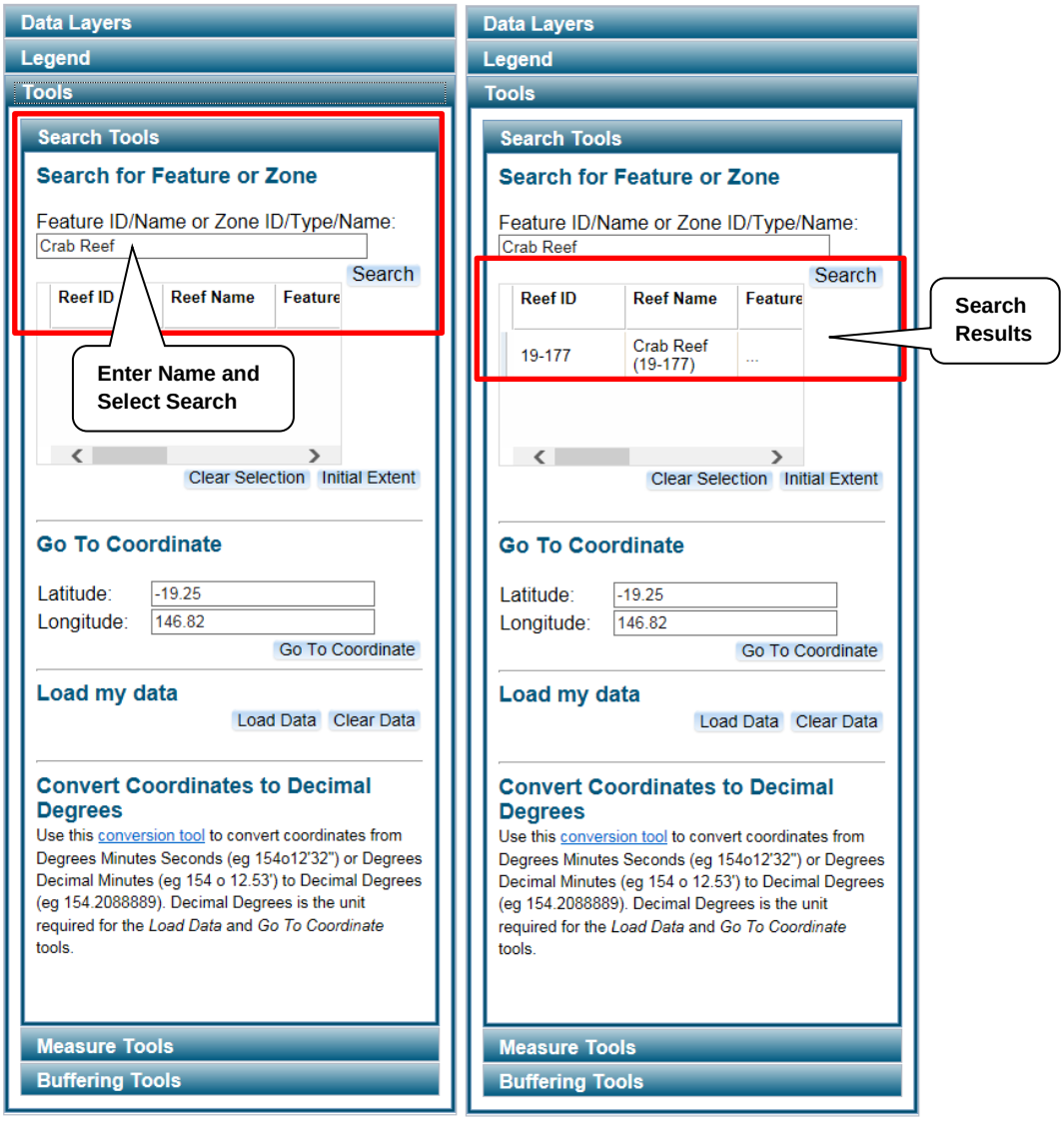


ADDITIONAL TOOLS

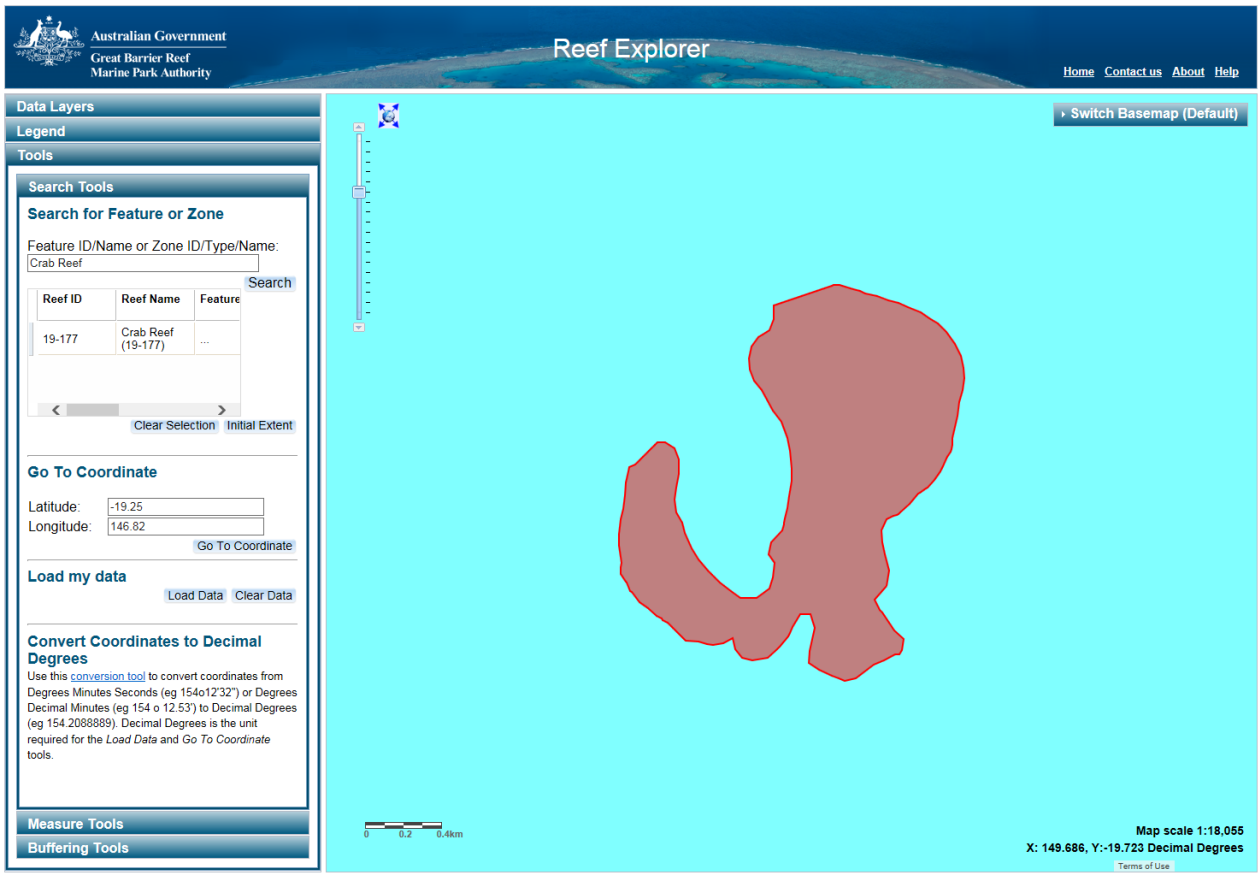
Search Tool

The search tool has been designed to allow users to search for a reef, Island, rock cay or zone. Enter a name or number into the form below, and then click the "Search" button.

Reef numbers will need to be in their correct format of NN-NNN e.g. 19-177 for Crab Reef. Zone numbers will need to be in the format of ZZ-NN-NN e.g. CP-18-4046



If a reef or zone is found the details will be displayed in the table below the search button, and clicking on each individual row, will zoom to that feature.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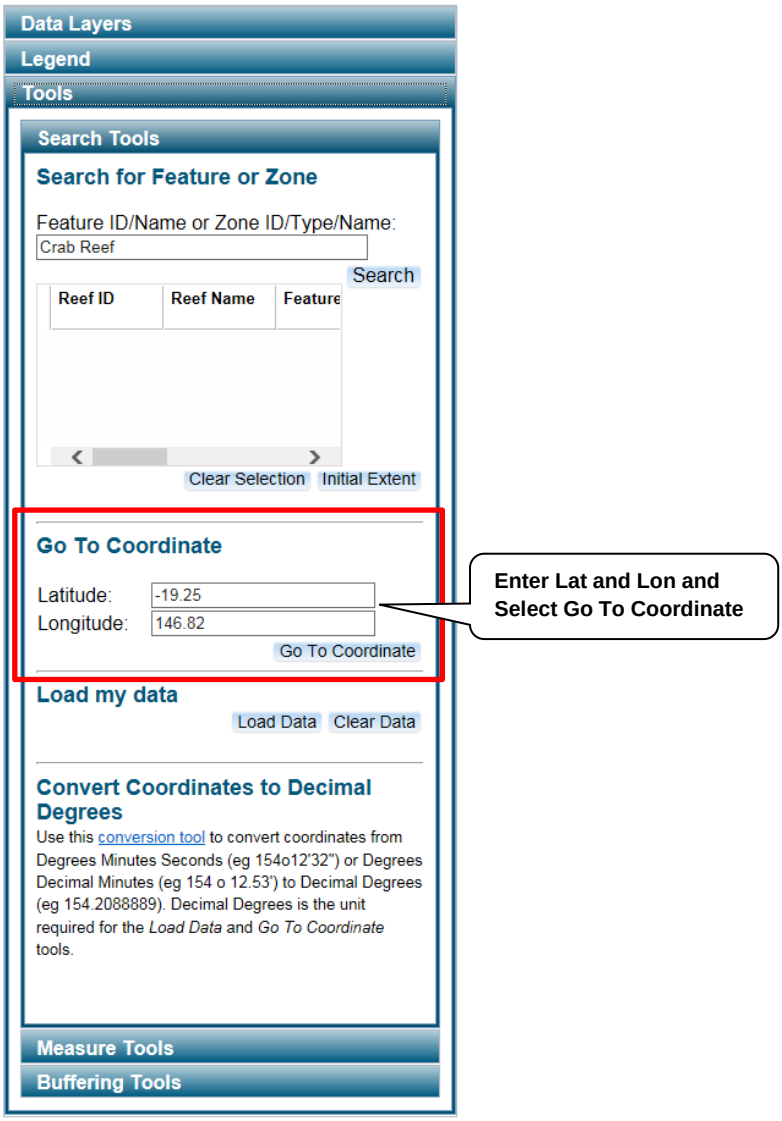
Search for Feature or Zone
Feature ID/Name or Zone ID/Type/Name:
Crab Reef
Search
Reef ID
Reef Name
Feature
19-177
Crab Reef (19-177)
...
Clear Selection
Initial Extent
Go To Coordinate
Latitude:
-19.25
Longitude:
146.82
Go To Coordinate
Load my data
Load Data
Clear Data
Convert Coordinates to Decimal Degrees
Use this conversion tool to convert coordinates from Degrees Minutes Seconds (eg 154o12'32") or Degrees Decimal Minutes (eg 154 o 12.53') to Decimal Degrees (eg 154.2088889). Decimal Degrees is the unit required for the Load Data and Go To Coordinate tools.
Measure Tools
Buffering Tools
Switch Basemap (Default)
0
0.2
0.4km
Map scale 1:18,055
X: 149.686, Y:-19.723 Decimal Degrees
Terms of Use

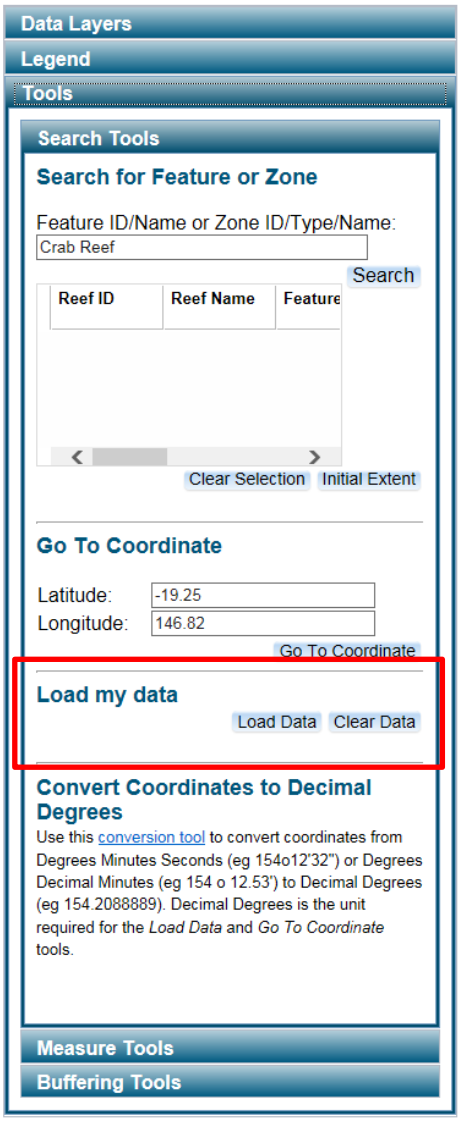
Go To Coordinate

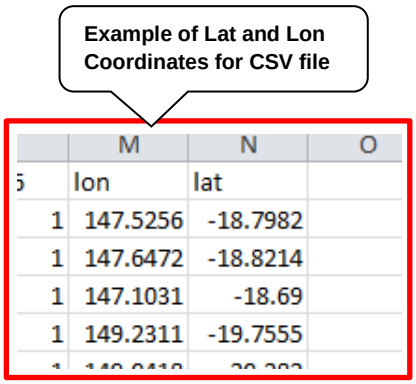
You are also able to zoom to a specific Latitude and longitude using the “Go to Coordinate” tool as shown below. This tool can also be found in the “Search Tools” pane. Coordinates need to be in decimal degrees as shown in the example. There is a link to the coordinate converter underneath the tool.



Load my data (CSV)

There is also an option to add your own CSV data, within compatible browsers only.



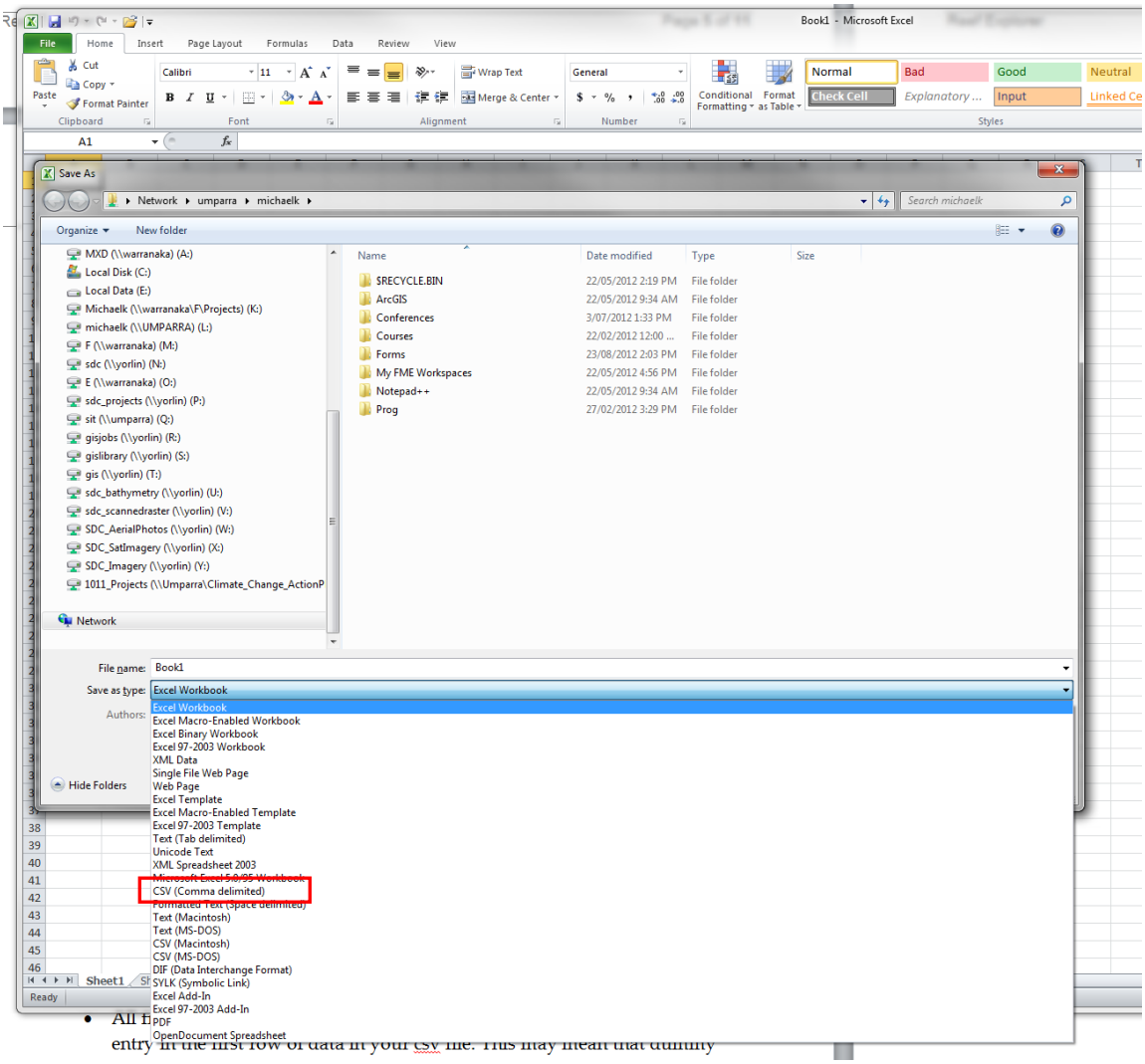


The CSV file must have the following specifications:

- Must have fields with the latitude and longitude in **decimal degrees**. There is a free converter available here to convert from degrees, minutes, seconds or degrees, decimal minutes to decimal degrees. This converter is also available from the application
- The fields with the co-ordinates also must be called either **lon** and **lat** or **x** and **y**. Remember that your Y axis or **latitude** will need to be a **minus (-)** value for the southern hemisphere.

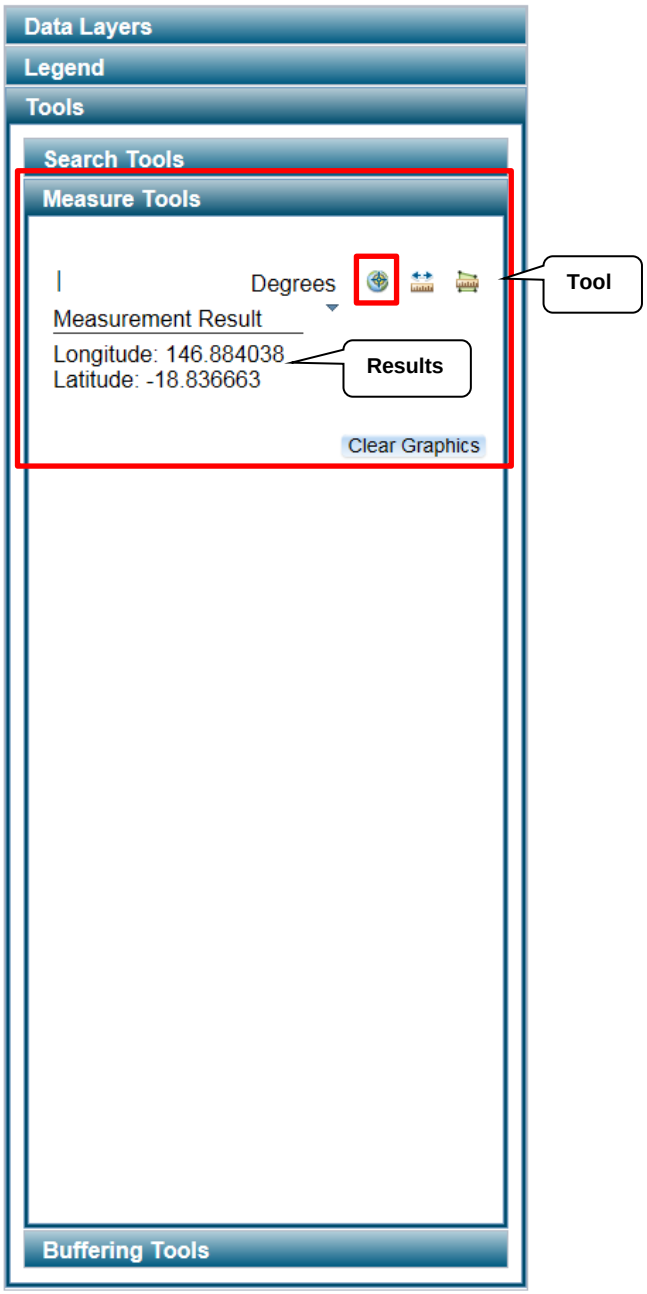
- All fields that you want to display in the popup for the layer must have an entry in the first row of data in your csv file. This may mean that dummy data or null data needs to be entered.

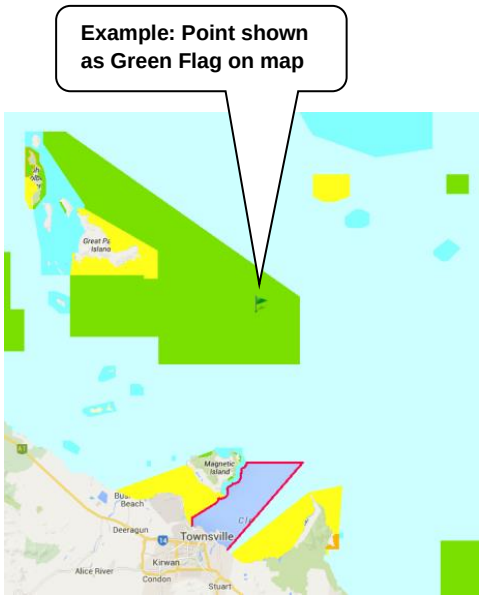
To create a .csv from an excel spreadsheet select “file” then “save as” and select the “save as type” menu as shown in the diagram below. From this list choose “CSV(Comma delimited)”



Measure Tools

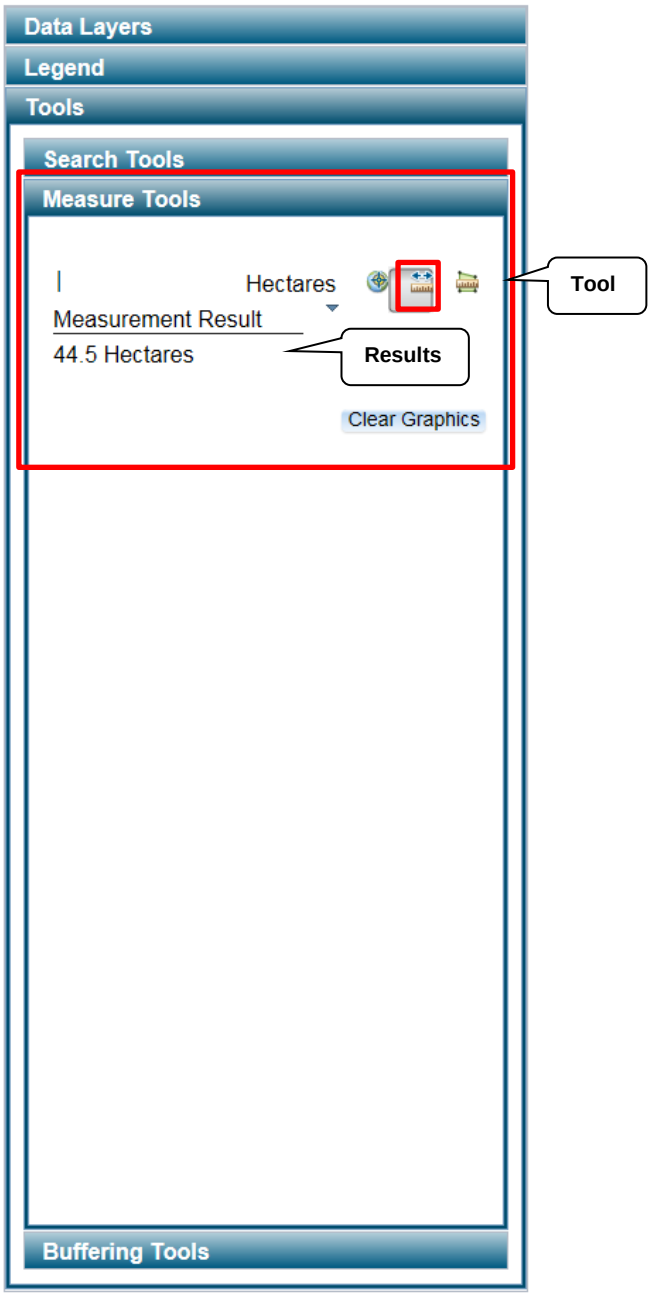
Use the point tool to create a point and get its coordinates. Select the 'Location' Tool then select the units (Degrees of DMS (Degrees Minutes Seconds)). Left mouse click on the map to add the flag. The results will be returned as a measurement result.

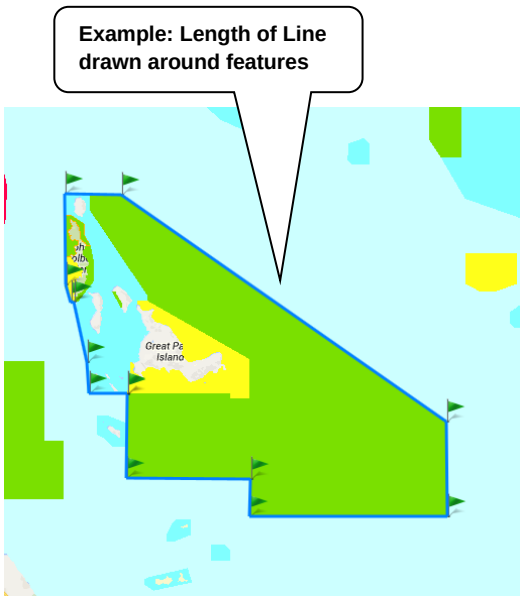


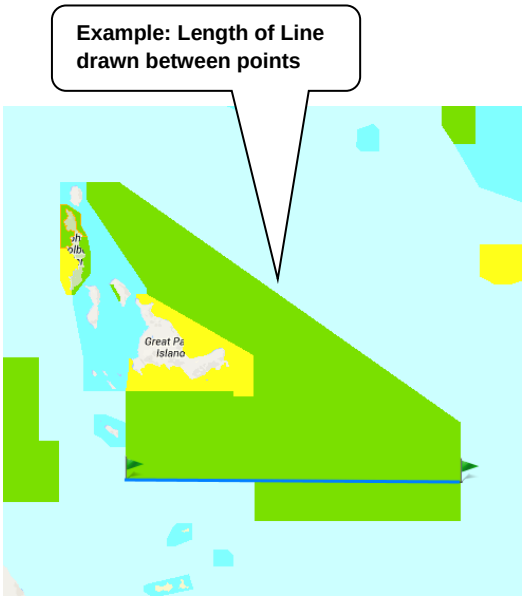


Please note that for all of these tools the measurements are indicative only. Should you require more accurate measurements please contact the Spatial Data Centre.

Use the Distance tool to measure the distance between 2 or more points. Select ‘Distance’ tool then select the units of measurement. Single left click on the map to start drawing. Single left click for any in between points and double click to finish the line.

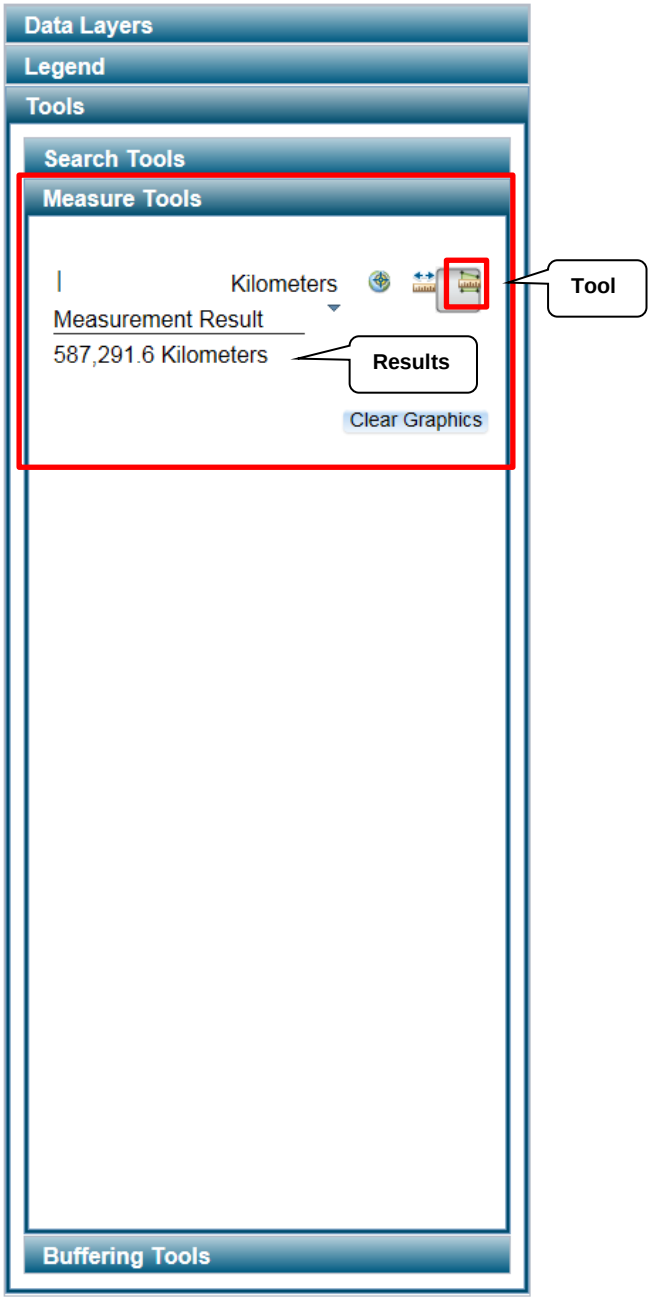






Please note that for all of these tools the measurements are indicative only. Should you require more accurate measurements please contact the Spatial Data Centre.

Use the ‘Area’ tool to find the area of any polygon you draw. Select the ‘Area’ tool then the units you would like the measurement returned in. Start drawing the polygon by single left mouse clicking, every time you want to add a vertex (change direction) single left click. To finish the polygon double left click your mouse. You can change the Unit of measurement after creating the polygon as well.



Please note that for all of these tools the measurements are indicative only. Should you require more accurate measurements please contact the Spatial Data Centre.

Buffering Tools

The buffering tools will allow you to draw a point, line or polygon on the map, and then visualise a buffer based on the distance entered.

In the buffer parameters window choose the distance and unit of measurement to buffer by and then select point, line or polygon and draw your graphic on the map.

A single mouse click will add a vertex or point, and a double mouse click is used to complete the line or polygon.